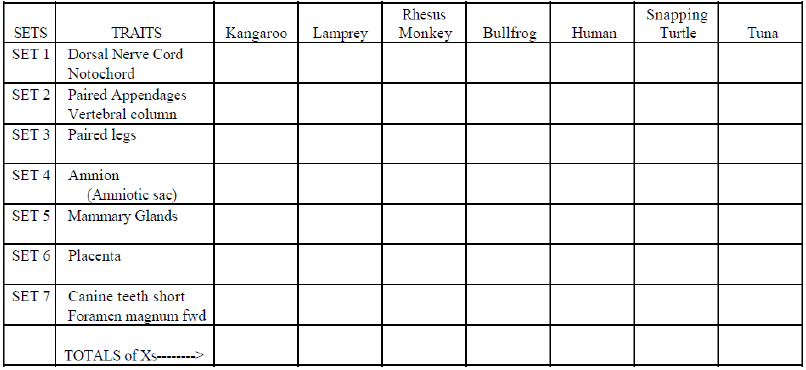
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**Cladogram Practice Worksheet**

Ms. Ottolini, AP Biology

1. Based on the morphological data in the table below, draw a phylogenetic tree that reflects the evolutionary relationships of the organisms.



2

4

7

3

6

1

5

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

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X

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X

X

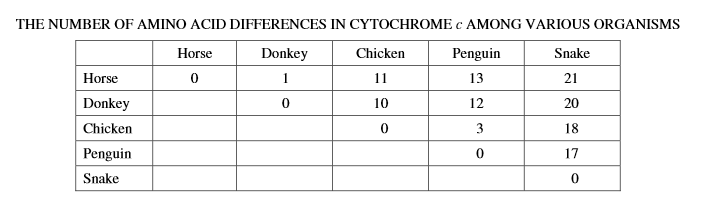
X

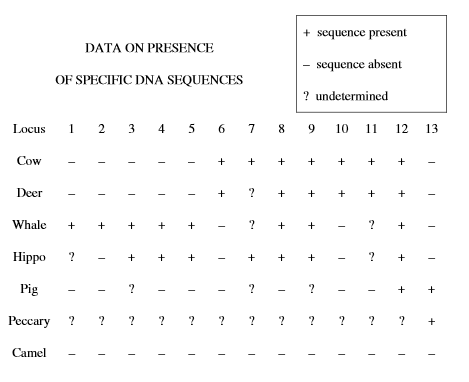
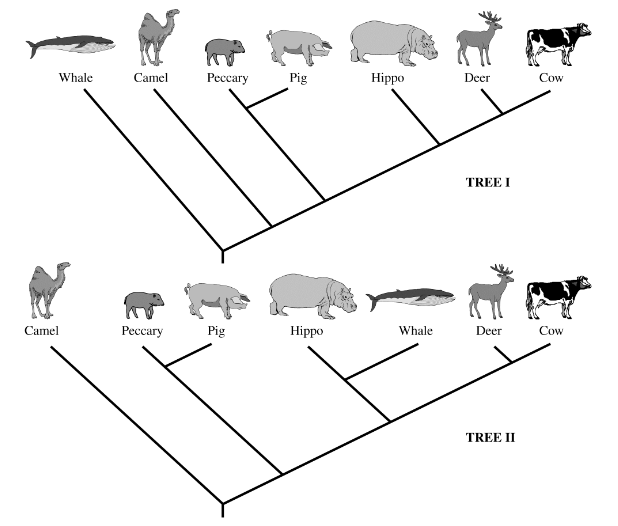
X

X

X

2. Based on the molecular sequence data in the table below, draw a phylogenetic tree that reflects the evolutionary relationships of the organisms based on the differences in their cytochrome c amino-acid sequences.



3. Based on the principle of parsimony (the simplest explanation is the best) and the genomic information in the table shown, identify which tree is the best representation of the evolutionary relationship of these animals, and justify your answer.